ATLANTIC LITHIUM

7 December 2021

SCOPING STUDY UPDATE YIELDS SIGNIFICANT UPSIDE
Ewoyaa Lithium Project 11 Year Mine Life
Post-Tax NPV Increases to US$789m

Scoping Study Update Confirms Ewoyaa Lithium Project is an Industry-leading Asset

Atlantic Lithium Limited (AIM: ALL, OTC: ALLIF, "Atlantic Lithium" or the "Company"), the African focussed lithium exploration and development company, is pleased to announce an updated Scoping Study (the "Study Update") on the Ewoyaa Lithium Project ("Ewoyaa" or the "Project") in Ghana, West Africa, reaffirming it is an industry-leading asset. The Scoping Study Update incorporates the increased JORC resource of 21.3Mt, resulting in a significant improvement in project economics and life of mine.

HIGHLIGHTS:

- **Scoping Study Update retains business case for 2 million tonnes per annum ("Mtpa") production operation with life of mine ("LOM") revenues exceeding US$3.43bn.**
- **Study Update increases Project's LOM operations to over 11 years, producing an average 300,000tpa of 6% Li_2O spodumene concentrate.**
- **In addition to spodumene production, the Study Update incorporates two additional revenue streams:**
  - **A saleable direct shipping ore ("DSO") Fines product**
  - **A saleable Feldspar by-product**
- **Study Update delivers exceptional financial outcomes:**
  - **LOM revenues exceeding US$3.43bn, Post-tax NPV_8 of US$789m, IRR of 194% over 11.4 years**
  - **US$70m capital cost with industry-leading payback period of <1 year**
  - **C1 cash operating costs of US$249 per tonne of 6% lithium spodumene concentrate Free on Board ("FOB") Ghana Port, after by-product credits**
  - **Pre-tax NPV_8 of US$1.23bn and EBITDA of US$2.02bn for LOM**
  - **Average EBITDA of US$178m per annum**
- **Preliminary Australian Nuclear Science and Technology Organization ("ANSTO") test-work confirms Ewoyaa concentrate produces high purity, battery-grade Lithium Carbonate ("LC") and Lithium Hydroxide Monohydrate ("LHM").**
- **Project provides outstanding asset fundamentals, logistics and access to infrastructure:**
  - **Conventional open cut mining operation from surface with low to moderate stripping ratios**
  - **Simple processing via conventional Dense Media Separation only ("DMS"), producing a premium 6% spodumene concentrate saleable product at a 6.3mm coarse crush**

- **Excellent geology and metallurgy with potential upside for improved DMS recoveries**
- **First quartile cash costs; low capital and operating costs with a low carbon footprint**
- **Significant exploration upside potential from the historic Egyasimanku Hill deposit (1.5Mt @ 1.66% Li_2O, non-JORC) and surrounding 560km^2 portfolio**
- **Close proximity to excellent logistics and infrastructure – only 110km by road from the deep-sea port of Takoradi, adjacent to highway and high voltage ("HV") powerlines, including hydroelectric sources**

- **Significant potential for resource upgrades; project metrics substantially improve with increased LOM beyond 12 years.**

Commenting on the Company's latest progress, Vincent Mascolo, CEO of Atlantic, said:

"***Today's landmark update regarding the Company's exceptional Scoping Study confirms that the Ewoyaa is an industry-leading asset and transformational for Atlantic Lithium.***

"The Study outlines a robust 2Mtpa operation which can deliver excellent cash flows, a very quick payback and a pre-tax NPV of over a billion US dollars from a 11.4-year operation, producing a coarse, premium DMS concentrate product.

"The Project leverages existing infrastructure, including directly adjacent HV power, a major highway within 1km of the site, and the major port of Takoradi 110km away. Few hard-rock lithium projects worldwide can boast the proximity to existing operational infrastructure, lithium grade and a simple DMS-only process route that separates Ewoyaa from its peers. With the benefit of adjacent infrastructure and without the need to include expensive milling and flotation circuits, the Project benefits from a very low upfront capital expenditure.

"Our resource continues to grow, and the upside of the Project is clear; further resource drilling recently completed, as such, we expect that the Project metrics will improve beyond the current defined LOM. It is estimated that every additional year of production will add up to c. US$60m in post-tax NPV per annum. Given these fundamentals, we are very excited by the resurgence and exponential growth potential across the lithium supply chain and reaffirm to the market that Atlantic is ideally poised to capture the lithium market going forward."

Project Summary

The original Scoping Study results (*refer **RNS** of **19 January 2021***) were based on a maiden Mineral Resource Estimate ("MRE") of 14.5Mt grading 1.31% Li_2O (189kt of contained Li_2O). This Scoping Study Update is based on the upgraded MRE *(refer **RNS** of **1 December 2021***) which increased total resources to 21.3Mt at 1.31% Li_2O (278,000 tonnes of contained Li_2O).

The original concepts comprising the 2Mtpa Project particulars, as announced on 19 January 2021, have been retained, with the following enhancements:

- **DSO Fines Saleable Product**

The DSO Fines product is a separate product produced from the DMS processing plant that would normally report as a c.1% low-grade waste stream and represents 10-15% of the feed mass or 200,000 to 300,000 tpa. In the original Scoping Study, the DMS fines reported to the tailings dam, however Atlantic has engaged with potential off-takers for the sale of these fines and operating costs and revenues have been included in the Study Update.

- **Feldspar Saleable Product**

  An additional DMS processing circuit was added to the original process plant design to accommodate the extraction of Feldspar, in addition to the primary spodumene concentrate product. Processing by DMS is expected to yield up to 300,000tpa of Potassium oxide / Sodium oxide ("K_2O / Na_2O") mixed alkali Feldspar as a by-product, with potential for applications in glass, ceramics and other traditional Feldspar industries. The extraction of Feldspar is supported by initial metallurgical testwork, and a marketing study prepared by First Test Minerals Ltd (UK). Ceramics industries represent an excellent opportunity to Atlantic, owing to the established markets in north Africa, Spain, Portugal and Italy which are logistically well positioned to Ghana, as well as local ceramics industries in Ghana.

Unchanged from the original study, the Project proposes a contract mining operation, semi-mobile contract crushing facility and fixed conventional DMS processing facility for spodumene concentration, capable of treating 2.0Mtpa of ore over an initial 11.4-year mine life. The Project benefits from easy access to infrastructure, including the major Accra-Takoradi highway within 1km of the site, high voltage power running through the exploration lease area, and ample accommodation in the vicinity of the Project, providing localised benefits for employment of labour, and utilisation of existing service providers and suppliers (*refer **Figure 1***).

Atlantic managed the Scoping Study Update with various industry expert consulting firms retained to contribute to key areas. This announcement provides a summary of the key findings of the Study highlighting significantly enhanced results when compared to the original scoping study.

Project Location

The Project includes the Ewoyaa, Ewoyaa Northeast, Abonko, Anokyi, Grasscutter, Kaampakrom, Bypass, Sill and Okwesi deposits located approximately 100km southwest of the capital of Accra. The Project area is immediately north of Saltpond, in the Central Region, and falls within the Mfantseman Municipality where Saltpond is the district capital (*refer **Figure 2***).

Access to the site from Accra is along the asphalt N1 Accra-Cape Coast-Takoradi highway which runs along the southern boundary of the Project. Several laterite roads extend northwards from the highway and link communities in the Project area. The port of Takoradi is within 110km to the west from the site, and accessible via the same highway.

__Figure 1__: High voltage power transmission lines, bitumen highway and operational Takoradi port close to Project site.

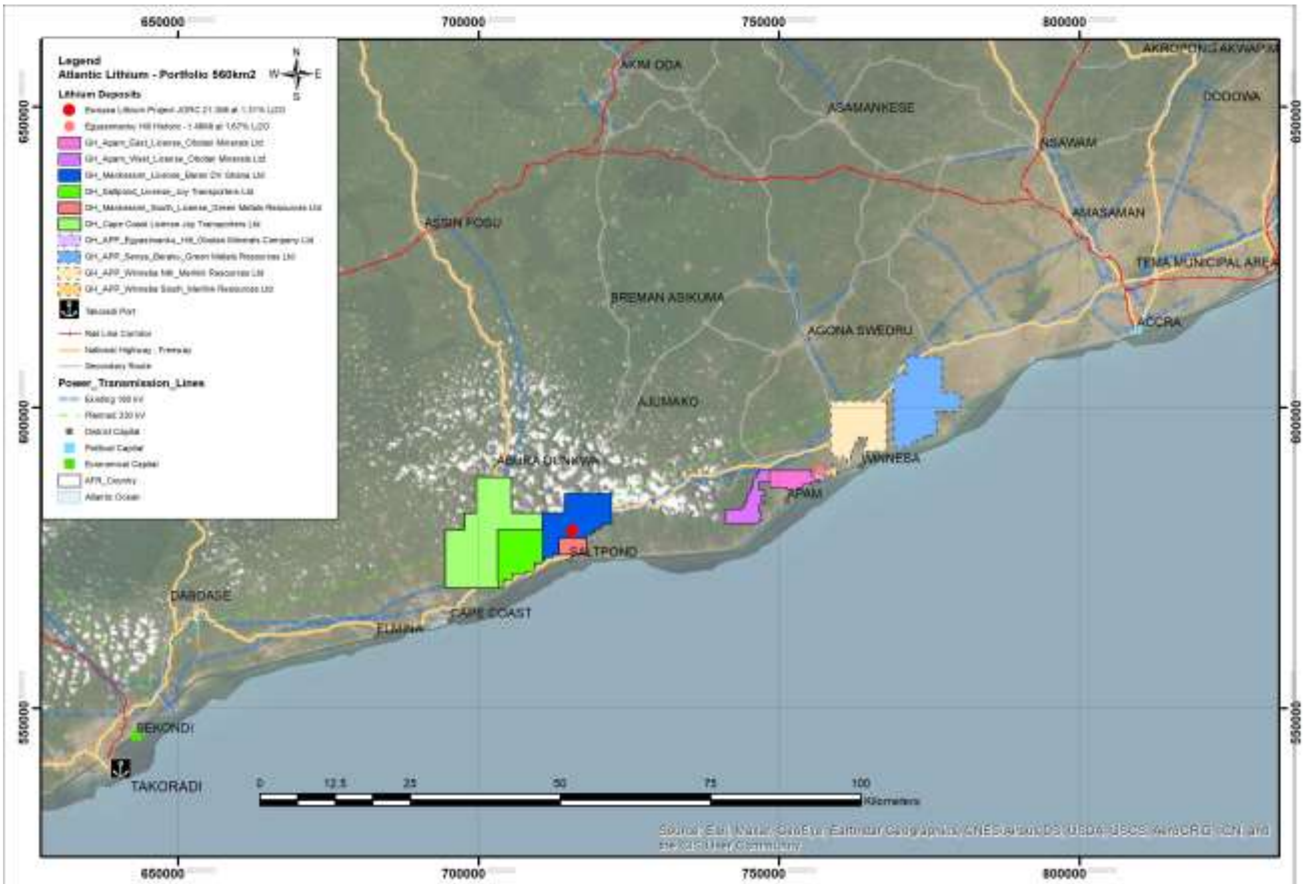

__Figure 2__: Project location on satellite imagery background.

Geological Setting

The Project area lies within the Birimian Supergroup, a Proterozoic volcano-sedimentary basin located in Western Ghana. The Project area is underlain by three forms of metamorphosed schist; mica schist, staurolite schist and garnet schist. Several granitoids intrude the basin metasediments as small plugs. These granitoids range in composition from intermediate granodiorite (often medium grained) to felsic leucogranites (often coarse to pegmatoidal grain size), sometimes in close association with pegmatite veins and bodies.

Pegmatite intrusions generally occur as sub-vertical dykes with two dominant trends: either striking north-northeast (Ewoyaa Main) and dipping sub-vertically to moderately southeast to east-southeast, or striking west-northwest (Abonko, Kaampakrom, Anokyi, Okwesi and Ewoyaa Northeast) dipping sub-vertically northeast. Pegmatite thickness varies across the Project, with thinner mineralised units intersected at Abonko and Kaampakrom between 4m and 12m; and thicker units intersected at Ewoyaa Main between 30m and 60m, and up to 100m at surface.

Mineralisation

The Project area has two clearly defined domains, or material types, of spodumene bearing lithium mineralisation. Atlantic has termed these material types as Pegmatite Type P1 and Pegmatite Type P2; viz:

- P1: Coarse grained spodumene material, the dominant spodumene bearing pegmatite encountered to date, exhibiting very coarse to pegmatoidal, euhedral to subhedral spodumene crystals composing 20% to 40% of the rock.
- P2: Medium to fine grained spodumene material, where abundant spodumene crystals of a medium crystal size dominates. The spodumene is euhedral to subhedral and can compose up to 50% of the rock. The spodumene can be bi-modal with some larger phenocrysts entrained within the medium grained spodumene bearing matrix. Minor other lithium bearing phases are present.

There are four geometallurgical domains; coarse grained type P1 and finer grained type P2 pegmatites and their weathered or fresh equivalents. It is noted that metallurgical recoveries differ between the four material types, which is discussed later in this report.

Mineral Resource

A JORC (2012) compliant MRE was prepared by Ashmore Advisory Pty Ltd ("Ashmore") using ordinary kriging methods for resource estimation with a 0.5% Li_2O cut-off. The JORC (2012) compliant Mineral Resource was released to market on 1 December 2021 and is shown in ***Table 1***.

Drilling at the deposit extends to a maximum drill depth of 254m and the mineralisation was modelled from surface to a depth of approximately 230m below surface. The estimate is based on good quality reverse circulation ("RC") and diamond core ("DD") drilling data. Drill hole spacing is predominantly 40m by 40m in the well drilled portions of the Project and up to 80m by 80m to 100m by 100m across the breadth of the known mineralisation.

Table 1: JORC (2012) Mineral Resource Estimate (0.5% Li_2O Cut-off).

	Indicated			Inferred			Total		
	Tonnes (Mt)	Li_2O% Grade	Contained Li_2O (kt)	Tonnes (Mt)	Li_2O% Grade	Contained Li_2O (kt)	Tonnes (Mt)	Li_2O% Grade	Contained Li_2O (kt)
Abonko	0.7	1.49	11	0.7	1.36	9	1.4	1.43	20
Ewoyaa	3.7	1.37	51	7.7	1.15	89	11.4	1.22	140
Ewoyaa NE				2.6	1.46	38	2.6	1.46	38
Grasscutter	0.7	1.40	10	1.4	1.19	16	2.1	1.26	27
Anokyi				2.2	1.41	31	2.2	1.41	31
Okwesi				0.7	1.52	10	0.7	1.52	10
Sill				0.3	1.69	5	0.3	1.69	5
Kaampakrom				0.3	1.57	4	0.3	1.57	4
Bypass				0.2	0.88	2	0.2	0.88	2
TOTAL	**5.2**	**1.39**	**73**	**16.1**	**1.28**	**205**	**21.3**	**1.31**	**278**

The Current MRE is based on approximately 56,500m of drilling with an additional 28,000m of infill resource and extensional drilling completed not included in the MRE and with assays pending. The majority of the additional drilling is infill reverse circulation ("RC") and diamond core ("DD") resource drilling for conversion of inferred mineral resources to indicated. A smaller portion of extensional RC drilling was completed for resource growth with assays pending. Ongoing regional shallow auger grid drilling is continuing to define multiple additional pegmatite targets within the Ewoyaa pegmatite camp for future RC drill testing.

The Company is targeting a resource upgrade to a minimum total resource of 24Mt with a view of supporting a plus 12 year mine life for the PFS study. It is estimated that every additional year of production will add up to c. US$60m in post-tax NPV per annum.

Carbon Footprint

The Electric Vehicle ("EV") industry supply chain is committed to a net zero carbon target and the European Union ("EU") in particular has proposed new regulations on carbon limits. From 1 January 2026, lithium-ion batteries will have to bear a carbon intensity performance class label and, from 1 July 2027, must comply with maximum carbon footprint thresholds.

The Ewoyaa project has an advantage over other spodumene projects in terms of:

- Power generation – this will be sourced from existing operational hydroelectric plants in the region.
- Shipping distance – close proximity to both Europe and the US compared to many peers.
- Product haulage – only 110km from the major port of Takoradi.

As the mine develops, the intention is to assess the potential of ongoing developments in alternative fuel sources for mine vehicles and other sustainable power sources including solar and pumped hydro**.**

Mining Studies

Ewoyaa is a hard-rock, pegmatite (spodumene rich) hosted system with mineralisation beginning near surface and extending to depths exceeding 200m. The width of the mineralised pegmatite dykes varies between 100m to less than 10m over a cumulative pegmatite strike of approximately 5.2km (individual strike lengths between

600m to 140m). The currently defined pegmatites occur within a 3.5km by 2.5km area which remains open in all directions. In the more continuous sections of the Ewoyaa Main Zone the pegmatite thickness is typically between 30m to 60m.

These pegmatite veins have been assessed for open pit mining and processing via a crushing circuit and DMS process to produce a coarse spodumene concentrate. On this basis, a preliminary review of open pit mining was completed by Mining Focus Consultants Pty Ltd ("MFC") utilising the 'Whittle Four-X' software.

The WHITTLE™ pit optimisations were conducted for the Study by MFC based on MRE by Ashmore. Pit Optimisation Parameters are summarised in ***Table 2*** and pit shells depicted in ***Figure 3***.

Table 2*: Mine scheduling assumptions for 2.0Mtpa throughput Option (all dollars in US$).*

Parameter	Unit	PREVIOUS	2.0Mtpa NEW
DMS Plant throughput	tpa	2,000,000	2,000,000
Mineral Resources	JORC (2012) Non-JORC	Indicated & Inferred Historical deposit	Indicated & Inferred Historical deposit
Concentrate grade (6% Li_2O)	%	6.0	6.0
Spodumene Pit Optimisation Price (6% Li_2O) price (FOB Ghana)	$/t	600	800
Spodumene LOM Sell Price (6% Li_2O) price (FOB Ghana)	$/t	650	900
Product moisture content	%	3.0	3.0
Processing recovery			
P1 Fresh Material	%	72%	72%
P1 Transition Material	%	68%	68%
P2 All Material	%	51%	51%
Operating Costs			
Mining cost	$/t mined	$3.25	$3.25
Processing cost	$/t processed	$12.10	$12.10
General and administration	$/t processed	$3.37	$3.37
Stockpile rehandling	$/t processed	$0.54	$0.54
Road Freight - Spodumene	$/t	$15.80	$15.80
Sea Freight - Spodumene	$/t	Not applicable (FOB basis)	Not applicable (FOB basis)
Sustaining Capital	$/t processed	$0.44	$0.44
Closure Costs	$/t processed	$0.64	$0.64
Discount rate	%	8.0	8.0
Dilution	%	Nil	Nil
Mining recovery	%	100	100
Slope angle	degrees	47	47
Royalties			
Government	%	5	5
Local JV Partners	%	1.5	1.5
Marketing and insurance	% of sales	3	3
Corporate tax rate	%	35	35

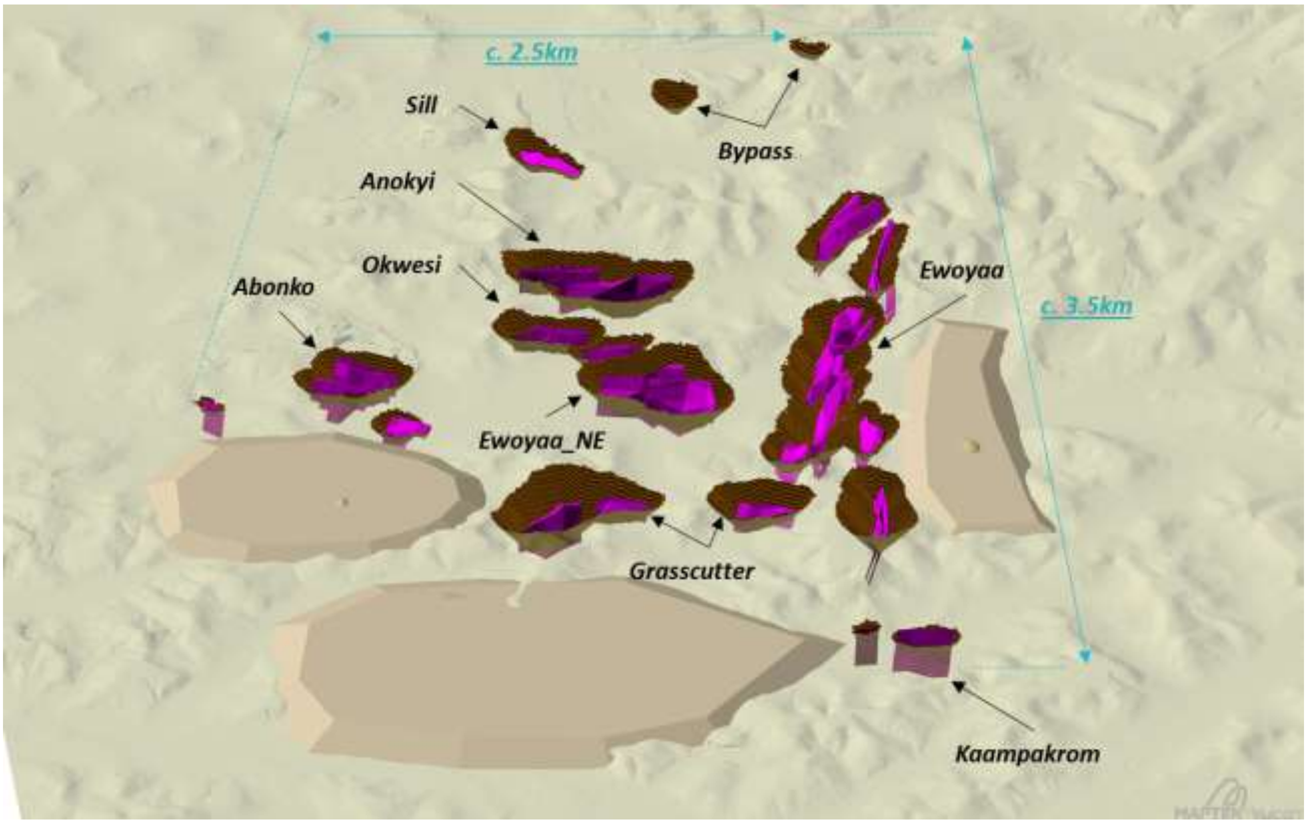

Figure 3: *Delineation of resources, Project pit shells and waste dumps; view looking south.*

A summary of open pit optimisations is indicated in ***Figure 4*** below.

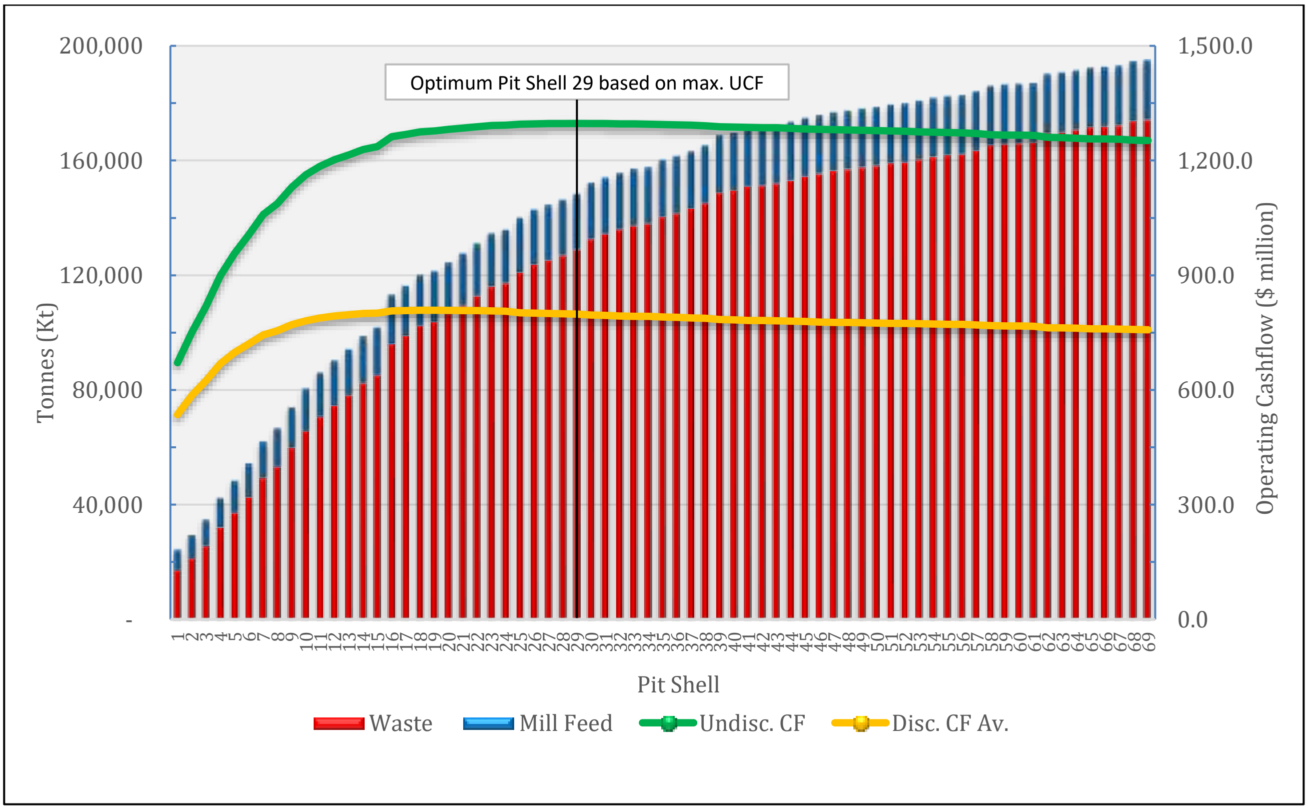

Figure 4: *Pit Optimisation Results – Indicated and Inferred Resources.*

The optimisation results show that a mining operation could be developed at the Project at the throughput case examined of 2Mtpa. Further study of capital and operating costs to generate project cash flows was conducted, supporting the development of mine production schedules.

Scheduling Results

The mine scheduling results are summarised in the tables and figures below, and indicate that:

- Plant throughput targets had been achieved for the 2Mtpa production rate.
- Processing of Inferred resources had been deferred to the back end of the production schedule.
- Material movement appeared achievable for all cases and mining would be completed in advance of processing.
- Bench turnovers are considered to be within acceptable limits, however detailed analysis has not been conducted given the early study phase of the Project.
- The release of pits and pit stages is dictated by both value and Project logistics.
- Egyasimanku Hill is not included in the JORC MRE, however was included in the cash flow modelling at the back end of the production schedule, adding 1.48Mt to the overall total ore mined.
- An additional 2Mt of ore based on the assumption of discovering additional material from ongoing exploration at Ewoyaa, included in the cash flow modelling during the last 12 months of production.

Table 3: *Mine Schedule Material Breakdown by Pit – 2.0Mtpa (projected).*

Pit Name	Total Material	Waste	Strip Ratio	Plant Feed	Li_2O Grade	Conc. 6%	P1 Ore	P2 Ore
	[kt]	[kt]	[w:o]	[kt]	[%]	[kt]	[kt]	[kt]
Ewoyaa Main Pit	36,010	27,886	3.4	8,124	1.25	1,137	6,000	2,124
Ewoyaa North Pit	10,576	9,827	13.1	748	1.25	112	748	-
Ewoyaa South 1 Pit	3,191	2,653	4.9	538	0.91	53	415	123
Ewoyaa South 2 Pit	5,578	4,606	4.7	972	1.29	143	839	132
Ewoyaa NE	24,914	22,491	9.3	2,423	1.49	431	2,423	0
Abonko Main	11,360	10,396	10.8	965	1.46	169	965	0
Abonko North	1,258	1,058	5.3	200	1.61	38	200	0
Abonko East	174	146	5.3	28	0.88	3	28	0
Grasscutter Pit 1	5,359	4,875	10.1	483	1.05	61	483	0
Grasscutter Pit 2	20,252	18,850	13.4	1,403	1.35	228	1,403	0
Okwesi	7,172	6,533	10.2	639	1.52	116	639	0
Anokyi	16,664	14,498	6.7	2,166	1.41	366	2,166	0
Kaampakrom Pit 1	1,772	1,621	10.8	151	1.58	28	151	0
Kaampakrom Pit 2	164	157	21.8	7	1.92	2	7	0
Sill	1,945	1,677	6.3	268	1.68	54	268	0
Bypass Pit 1	913	767	5.2	146	0.93	7	146	0
Bypass Pit 2	334	259	3.4	75	0.83	16	75	0
Ewoyaa Extension	15,240	13,269	6.7	1,970	1.23	267	1,585	386
Egyasimanku Hill	8,183	6,704	4.5	1,480	1.21	187	888	592
TOTAL (NEW)	171,059	148,273	6.5	22,786	1.31	3,418	19,429	3,357
PREVIOUS version	88,495	72,075	4.4	16,288	1.34	2,390	18,287	4,668

Processing/Metallurgy

Metallurgical test work supervision, interpretation and flow sheet development work to support the Study was managed by Trinol Pty Ltd ('Trinol') and all beneficiation testing performed by NAGROM Laboratories ("NAGROM") in Perth, Western Australia.

Drill core from a total of seventeen composites, obtained from the Ewoyaa lithium deposit in late 2018, was sent to NAGROM for preliminary metallurgical assessment. Geometallurgically, the mineralisation was identified as coarse P1 and fine P2 types with fresh and transitional zones within each type as noted above:

- P1: Coarse grained spodumene ore, the dominant spodumene bearing pegmatite encountered.
- P2: Medium to fine grained spodumene ore, where abundant spodumene crystals of a medium crystal size dominates.

The metallurgical test work was conducted from March to July 2019 to measure key physical properties, to gauge initial response to gravity separation using heavy liquid separation ("HLS") testing and to characterize crystal phases using X-ray diffraction ("XRD").

Follow up testwork was conducted at a larger scale using P1 Fresh ore in a 100mm DMS cyclone to generate bulk sample for preliminary conversion tests at Australia's Nuclear Science and Technology Organisation

("ANSTO") in Sydney and to investigate the effect of re-crushing DMS middlings on overall product recovery and yield of P1 and P2 ores.

Physical Parameters

Before core composites were crushed, key physical parameters were measured as recorded in ***Table 4***. The Uniaxial Compressive Strength ("UCS") and Crusher Work Index ("CWi") values indicate that Ewoyaa mineralisation is slightly harder than other pegmatites and this is reflected in the lower production of fines after crushing in the laboratory.

***Table 4**: Physical Properties.*

Parameter	Unit	P1 Ore Type	P2 Ore Type
Density	t/m3	2.67 – 2.79	2.64 – 2.80
UCS	MPa	150-200	>200
CWi	kWh/t	20.83	17.3

DSO Potential

Size by size analysis after crushing from 10mm to 6.3mm indicated the lithium was fairly evenly distributed through the size fractions which suggested the mineralisation was not amenable to simple beneficiation for the production of direct shipping ore ("DSO").

Gravity Processing

The overall results obtained from HLS and DMS100 testing are summarised in the tables below:

***Table 5:** Summary of test-work results on P1 mineralisation at 6.3mm crush size.*

Mineral Type	Test	Head grade % Li_2O	Conc Grade % Li_2O	Conc Mass % Overall	Recovery % Overall
P1 Fresh	DMS -no re-crush	1.68	6	21	69
	DMS -with re-crush	1.68	6	22	72
P1 Transitional	DMS -no re-crush	1.37	6	15	63
	DMS -with re-crush	1.37	6	16	68

***Table 6:** Summary of test-work results on P2 mineralisation at 6.3mm crush size.*

Mineral Type	Test	Head grade % Li_2O	Conc Grade % Li_2O	Conc Mass % Overall	Recovery % Overall
P2 Fresh	HLS -no re-crush	1.00	5.5	7	42
	HLS -with re-crush	1.00	5.5	8	46*
P2 Transitional	HLS -no re-crush	1.23	5.6	13	55
	HLS -with re-crush	1.23	5.6	14	61*

* Average of 51% overall P2 recovery was adopted for the Study.

These results demonstrated that both ore types responded well to gravity processing, with up to 72% recovery for the P1 Fresh and an average of 51% for the P2 Fresh after re-crushing the gravity middlings. Further geological work is planned to better delineate the zones of P1 and P2 ore types within the resource to allow a blending regime to be developed to optimise annual plant recovery.

Concentrate Quality
A feature of the metallurgical test work was the consistently good quality of concentrates produced. The iron content of the concentrates, as expressed by % Fe_2O_3, was below 1% and combined alkalis, % Na_2O & K_2O, less than 3%. Coupled with the coarse size of the concentrates and the very favourable project logistics, these are very desirable properties for off-takers.

Fines Processing
Around 10-15% of the contained lithium is in the -0.5mm fines fraction that is screened out before gravity processing in the DMS circuit, as gravity processing below this size is challenging. A number of mines utilise flotation to recover value from this fraction and a preliminary series of tests were done on P2 Fresh mineralisation to gauge the amenability of Ewoyaa spodumene to standard flotation techniques. The results were encouraging with 6% concentrates being produced at a recovery of 49% and a mass yield of 11%. This demonstrated the potential to improve overall recovery by capturing lithium loss due to fines generation during crushing, and so expand the economic lithium inventory of the deposit. The flotation option is not contemplated in this current phase given the DMS recoveries experienced, the higher demand for premium coarse product and the potential to sell the fines as a DSO product.

Conversion to Hydroxide
Ewoyaa concentrate was tested by ANSTO (*refer **RNS** of **21 January 2020***) to demonstrate that it could be converted to lithium hydroxide using a conventional conversion process based on the preparation of lithium carbonate followed by conversion to hydroxide.

The report concluded that "*lithium carbonate could be produced which was amenable to conversion to high quality lithium hydroxide via metathesis with high purity lime, followed by evaporation and crystallisation*."

Lithium carbonate of 99.92% purity was produced from which high purity 56.5% lithium hydroxide monohydrate (LHM) was made.

Processing Plant Concept and Layout
The cost of the plant and infrastructure has been based on similar gravity DMS installations that are operating in Western Australia. The following key parameters and assumptions were made and varied only as the throughput rate demands. A conceptual flow sheet design and layout are shown in ***Figure 5***.

- Three-stage crushing which was assumed to be sufficient to meet the target crush size for liberation of spodumene; circa 6.3mm. Contract crushing provision was assumed and quotations were solicited from a reputable Ghanaian contractor.
- Conventional two stage DMS processing plant; screening of fines at 0.5mm via dewatering and desliming cyclones in conjunction with a vibrating screen; allowance for re-crushing of secondary DMS middlings. At this stage of study, a flotation circuit was not included, with the Company focus being on low capital cost and ease of operation solution via DMS only.
- Product and rejects from the DMS circuit would be stockpiled and removed by front end loader and truck. The final concentrate product would be stockpiled for similar removal and assumed to be loaded onto 35 tonne tipper trucks. There was no capital cost allowance for the trucks, and it was assumed that a transport contractor could provide this service, from loading of concentrate right through to port storage and loadout. A separate quotation from an experienced freight forwarder was solicited and included in the operating costs.
- All equipment was assumed to be new, excepting contractor provided equipment i.e., crushing and freight equipment.

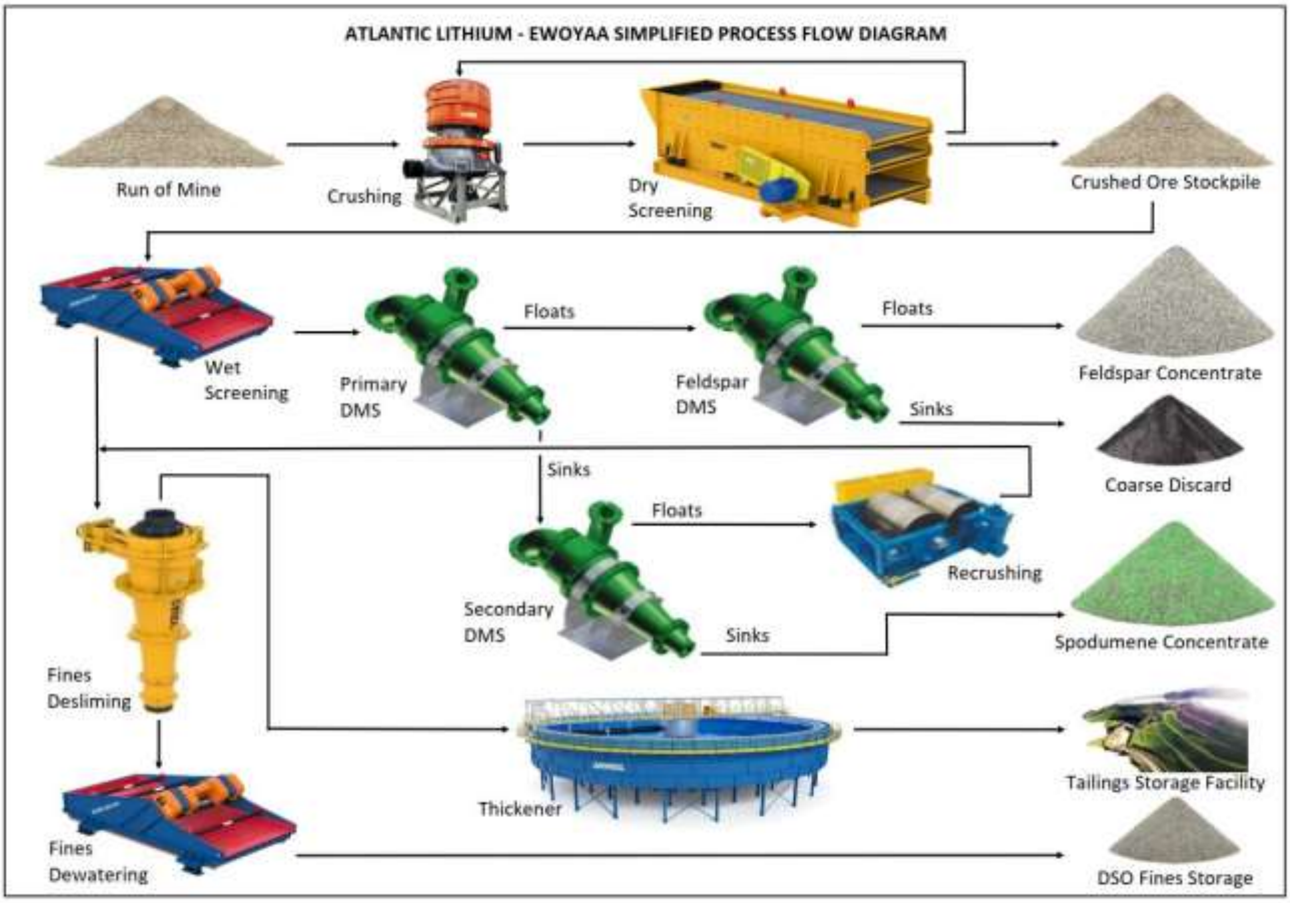

Figure 5: *Preliminary Process Flow Sheet.*

By-Product Processing

Gravity test work on the Ewoyaa material using bench scale HLS highlighted the potential to produce a feldspar product in the light 2.6 SG fractions. Results are summarised in ***Table 7***. Feldspar is generally defined as material containing a combined alkali content of Na_2O + K_2O in excess of 10%. Such a product would be attractive to the domestic ceramics industry in Ghana as well as the main target market of the European ceramics industry.

Table 7: *Feldspar potential from light gravity fraction.*

		SG 2.6 Floats					
		% K_2O	% Na_2O	Total Alkalis %	%DMS Mass	% Fe_2O_3	% TiO_2
P1 Transitional		5.3	2.9	8.2	25.2	0.03	0.009
P1 Fresh	Hi	9.6	3.6	13.2	12.7	0.09	0.008
	Lo	4.4	6.4	10.8	13.1	0.07	0.005
P2 Transitional		7.1	4.5	11.6	23.9	0.09	0.001
P2 fresh	Hi	9.2	3.5	12.7	34.2	0.11	0.001
	Lo	3.0	7.7	10.7	6.8	0.19	0.009

These results indicate that on average, around 10-15% of the material fed to the DMS plant could be recovered as a feldspar product. This translates to up to 300,000tpa of feldspar by-product based on the overall processing plant throughput of 2.0Mtpa.

Atlantic Lithium commissioned a preliminary marketing study from a recognised UK industrial minerals authority, First Test Minerals Ltd, and it demonstrated that because of the high alkali content, consistently low iron content and negligible titania content, this by-product would be attractive to the European tiles and sanitaryware industries. Selling prices of US$25 -100/t FOB Ghana port were indicated, which could amount to additional revenue ranging from US$7.5 - 30 million per annum. This additional income was considered to be significant in terms of the overall project viability and the production of feldspar product will be examined in more detail in the next study phase.

Financials

Operating Costs

Operating costs were developed from first principles, utilising a combination of database information from similar projects (both in Ghana and other lithium projects) and from project specific budgetary quotations solicited from experienced suppliers/contractors active in the region; refer ***Table 8***.

Operating Cost Assumptions

- Operating cost target accuracy, ±25%.
- Operating costs are reported in US$, all costs and exchange rates are as at 1Q2021, with the following forex rates used: US$ 1.00 = A$1.52, ZAR13.
- Power costs have been based on grid supply; electricity cost US$0.16/kWh assumed.
- Maintenance costs have been factored from the capital cost estimate supply cost.
- Corporate costs and associated company overheads are excluded.
- Ghana administration office costs are excluded.
- Corporate Tax, Ghana Education Trust Fund (GET) and VAT are addressed separately in the cash flow model; other taxes or duties are excluded.
- Project financing costs and sunk costs are excluded.
- Escalation and fluctuations in foreign exchange rates are excluded.
- Subsidies to local communities are excluded.
- Overtime allowance/loading for local Ghana labour set at 10%.

Table 8: *Operating Cost Estimate Summary.*

	PREVIOUS		2.0Mtpa NEW	
Cost Element	**US$/t Feed**	**US$/t SC6**	**US$/t Feed**	**US$/t SC6**
Contract Crushing	6.08	41.44	6.08	40.54
Processing Spodumene	5.41	36.90	5.41	36.10
General & Administration	2.48	16.90	2.48	16.54
Mining Management	0.72	4.91	0.72	4.80
Contract Mining	17.22	117.37	26.37	175.80
Sustaining Capital	1.56	10.65	2.69	17.92
Project Closure	0.69	4.69	0.98	6.55
SC6 Conc. Transport in Country	2.39	15.80	2.29	15.80
Shipping of Products	0.00	0.00	0.00	0.00
Total Operating Cost	**36.55**	**246.17**	**47.02**	**314.03**
By-Product Processing			6.12	40.81
By-Product Credits			(15.89)	(105.93)
Effective Operating Cost			**37.25**	**248.92**

Capital Costs

The capital costs for the Project were estimated based on recent cost data from similar sized projects, as summarised in ***Table 9***.

Table 9: *2.0Mtpa Capital Cost Breakdown, US$ ±25%.*

Area	US$ PREVIOUS	US$ NEW
1. Construction P&Gs	**3,183,603**	**3,183,000**
2. Plant & Services	**25,647,369**	**26,701,000**
3. Infrastructure	**11,626,909**	**11,627,000**
4. Mining	**1,462,185**	**1,462,000**
5. Management Costs	**6,446,281**	**6,446,000**
6. Owners Cost	**8,858,551**	**9,488,000**
7. Working Capital	**1,961,379**	**1,961,000**
Sub Total	**59,186,276**	**60,869,000**
8. Contingency	**8,877,941**	**9,131,000**
Grand Total	**68,064,217**	**70,000,000**

Capital Cost Exclusions

The capital cost estimate did not include for the following:

- Deferred capital costs of c. US$1.5m for the by-product processing equipment, noting that the production profile assumes by-product production will commence six months after commissioning of the lithium DMS plant. These deferred costs will be funded from Year 1 cash flows.
- Corporate costs and associated company overheads.
- Costs for potential future upgrades.
- Project financing costs.
- GST, VAT, or other taxes or duties.
- Sunk costs.

Financial modelling

A high-level preliminary financial model was developed for the purpose of evaluating the economics of the Project. Summary results from the financial model outputs are presented in tables within this section, including financial analysis, cash flow projections and sensitivities.

All costs are presented in current US Dollars ("US$").

The funding for the Project has been included on the premise that all project development requirements will be funded via the development funding agreement with Piedmont Lithium (NASDAQ: PPL).

Revenue was based on a fixed lithium selling price of US$900/t for a 6% concentrate, Free on Board ("FOB") Ghana port of Takoradi.

Operating costs for processing and administration were derived from estimates generated by budget quotations or benchmarking from similar operations and first principle estimates based on typical operating data. Mining costs have been provided by MFC based on contractor mining. No funding for exploration work during operations was included.

Depreciation and amortisation have been expensed at the rates applicable for tax deductibility under the Ghana fiscal regime for mining companies.

The Project would be subject to standard Ghana corporate taxation arrangements for exploitation companies. The model provided for the inclusion of a corporate tax rate of 35% and royalties paid to the Government based on a percentage of the return from production.

A 5% royalty is payable to the Ghanaian Government on sale of lithium concentrate. Additional royalties for the concessions are payable to one joint venture partner; 1% for LOM to the Ewoyaa, Abonko and Kaampakrom deposit JV partner, but capped at US$2M.

Cash flow models were prepared, and the results of the financial analysis are summarised in ***Tables 10-12*** following.

Table 10: Cash Flow Model Inputs Summary.

LOM Variable	Units	PREVIOUS	2.0Mtpa NEW
Mine Schedule Resources		Total Resource	Total Resource
Life of Mine	yrs	8.1	11.4
Waste Mined	kt	72,073	148,273
Ore Mined	kt	16,288	22,786
Strip Ratio, LOM	W:O	4.4	6.5
LOM Average Resource Grade (Li_2O)	%	1.31%	1.31%
LOM Average Recovery	%	65.6%	68.5%
% of P1 Material	%	70.9%	85.3%
6% Spodumene Production, LOM	kt	2,390	3,418
LOM Average Product	ktpa	295	300
Feldspar Production, LOM	kt	0	3,271
DSO Fines Production, LOM	kt	0	3,053
Operating estimated power draw	MW	16,244	16,918
Capex	**US$M**	**68.1**	**70.0**

Table 11 provides a summary of the operating cash costs contained within the cash flow model and includes by-product processing costs.

Table 11: Operating Cash Costs Summary.

LOM Variable	Units	PREVIOUS	2.0Mtpa NEW
Mining Costs Total	US$M	281	601
Processing Costs Total	US$M	187	283
General & Admin Costs Total	US$M	52	73
Freight & Selling Costs Total	US$M	39	173
GET Fund Contribution	US$M	5	9
Sub Total Operating Expenditure	**US$M**	**563**	**1,139**
Royalties (Government & NSR)	US$M	78	185
Rehabilitation Provision	US$M	11	22
Land Taxes & Fees	US$M	1	2
Marketing Costs	US$M	30	44
Corporate taxes paid	US$M	265	671
Sustaining Capital Costs	US$M	26	63
Net Operating Costs	**US$M**	**973**	**2,126**

Table 12 provides the results of pre- and post-tax cash flows, NPV's and Internal Rate of Returns ("IRR") for the base case, using a constant lithium concentrate selling price of US$900/t, feldspar selling price of US$50/t and 1% DSO fines product selling price of US$65/t: all FOB Ghana port.

Table 12: *Cash Flow Model Key Results.*

LOM Variable	Units	PREVIOUS	2.0Mtpa NEW
Revenue	US$M	1,553	3,437
IRR	%	125%	194%
C1 Cash Cost, after by-product credits	US$/t	247	249
NPV (8%) Pre-Tax	US$M	539	1,227
NPV (8%) Post Tax	US$M	345	789
EBITDA	US$M	854	2,024
Payback	Years	< 1	0.51
NPAT, LOM	US$M	492	1,233
NPAT / year average	US$M	61	108
Surplus Cashflow, Post Tax	US$M	496	1,224

Cash Flow Sensitivities

The post-tax Net Present Value ("NPV") sensitivity results are represented in ***Figure 6***.

Project cash flows were most sensitive to changes in concentrate selling price where a 5% drop in price resulted in a greater than 20% change to the post-tax NPV. This was closely followed by the sensitivity to changes in recovery or grade.

Sensitivity adjustments of project expenses demonstrated that mining costs, which made up the largest portion of operating expenditure, result in the most significant movements in project NPV followed by processing, concentrate transport and capital costs.

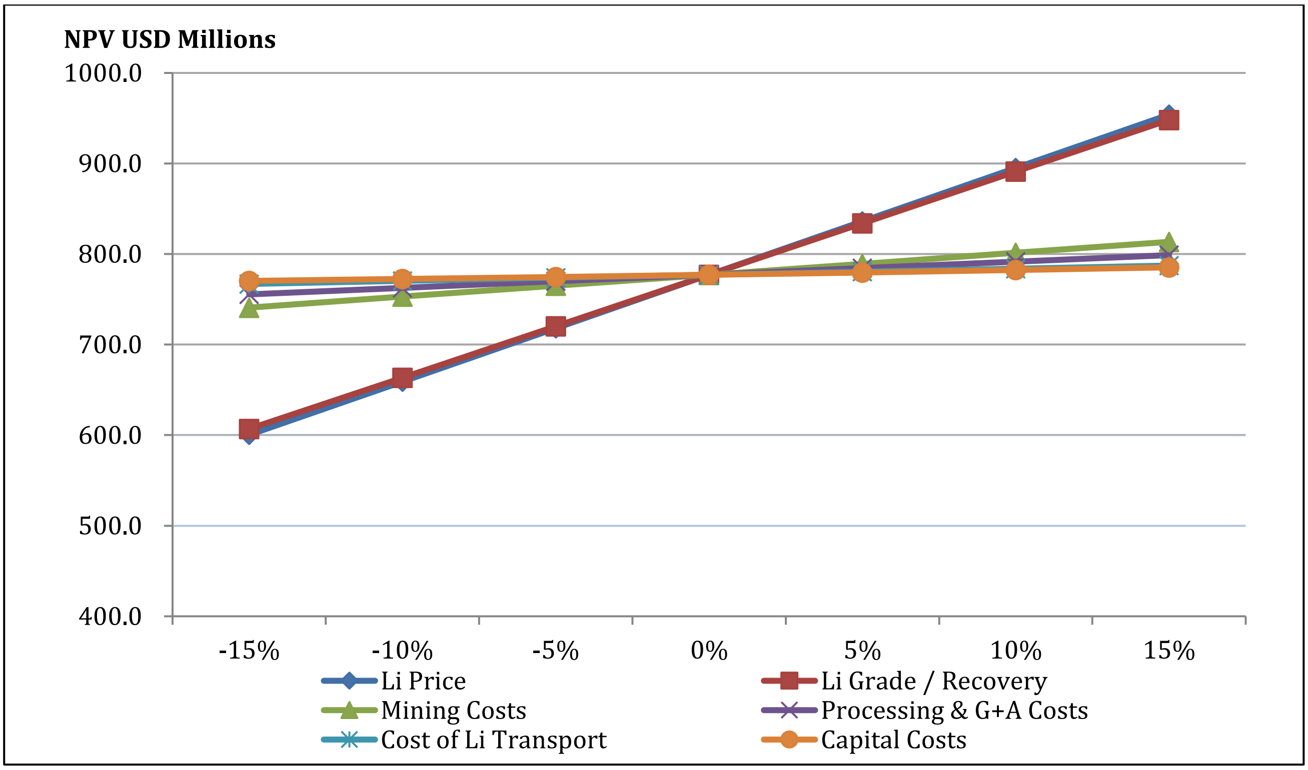

Figure 6: *Sensitivities Graph.*

Study Team

The main consultants engaged on the Study, including area of contribution, were:

Resource Modelling	Ashmore Advisory Pty Ltd	
Pit Optimisation and Mine Scheduling	Mining Focus Consultants Pty Ltd	
Beneficiation Test Work	NAGROM	
Conversion Test Work	ANSTO	
Process Interpretation and Design	Trinol Pty Ltd	
Operating and Capital Costs Cash Flow modelling	Zivvo Pty Ltd and Trinol Zivvo Pty Ltd	
Site Layouts	Primero Ltd	
Industrial Mineral Marketing	First Test Minerals Ltd	

Atlantic Lithium Ghana field team:

For any further information, please contact:

Atlantic Lithium Limited Tel: +61 2 8072 0640
Vincent Mascolo (Chief Executive Officer)
Amanda Harsas (Company Secretary)
www.atlanticlithium.com.au

SP Angel Corporate Finance LLP Tel: +44 (0)20 3470 0470
Nominated Adviser
Jeff Keating
Charlie Bouverat

Canaccord Genuity Limited Tel: +44 (0) 20 7523 4500
Joint Company Broker
Raj Khatri
James Asensio
Harry Rees

Liberum Capital Limited Tel: +44 (0) 20 3100 2000
Joint Company Broker
Scott Matheson
Edward Thomas
Kane Collings

SI Capital Limited Tel: +44 (0) 1483 413 500
Joint Company Broker Tel: +44 (0) 207 871 4038
Nick Emerson
Jon Levinson

Yellow Jersey PR Limited Tel: +44 (0)20 3004 9512
Henry Wilkinson
Matthew McHale
Dominic Barretto

Competent Persons
Information in this report relating to the exploration results is based on data reviewed by Mr Lennard Kolff (MEcon. Geol., BSc. Hons ARSM), Chief Geologist of the Company. Mr Kolff is a Member of the Australian Institute of Geoscientists who has in excess of 20 years' experience in mineral exploration and is a Qualified Person under the AIM Rules. Mr Kolff consents to the inclusion of the information in the form and context in which it appears.

Information in this report relating to Mineral Resources was compiled by Shaun Searle, a Member of the Australian Institute of Geoscientists. Mr Searle has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code). Mr Searle is a director of Ashmore. Ashmore and the Competent Person are independent of the Company and other than being paid fees for services in compiling this report, neither has any financial interest (direct or contingent) in the Company.

Information in this report relating to metallurgical results is based on data reviewed by Mr Noel O'Brien, Director of Trinol Pty Ltd. Mr O'Brien is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM) and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the December 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code). Mr O'Brien consents to the inclusion in the report of the matters based upon the information in the form and context in which it appears.

This announcement contains inside information for the purposes of Article 7 of the Market Abuse Regulation (EU) 596/2014 as it forms part of UK domestic law by virtue of the European Union (Withdrawal) Act 2018 ("MAR"), and is disclosed in accordance with the Company's obligations under Article 17 of MAR.

ATLANTIC LITHIUM

APPENDIX 1

JORC Table 1, Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• RC drill holes were routinely sampled at 1m intervals with a nominal 3-6kg sub-sample split off for assay using a rig-mounted cone splitter at 1m intervals. • DD holes were quarter core sampled at 1m intervals or to geological contacts for geochemical analysis. • For assaying, splits from all prospective ore zones (i.e. logged pegmatites +/- interburden) were sent for assay. Outside of these zones, the splits were composited to 4m using a portable riffle splitter. • Holes without pegmatite were not assayed. • Approximately 5% of all samples submitted were standards and coarse blanks. Blanks were typically inserted with the interpreted ore zones after the drilling was completed. • Approximately 2.5% of samples submitted were duplicate samples collected after logging using a riffle splitter and sent to an umpire laboratory. This ensured zones of interest were duplicated and not missed during alternative routine splitting of the primary sample. • Prior to the December 2018 - SGS Tarkwa was used for sample preparation (PRP100) and subsequently forwarded to SGS Johannesburg for analysis; and later SGS Vancouver for analysis (ICP90A). • Post December 2018 to present – Intertek Tarkwa was used for sample preparation (SP02/SP12) and subsequently forwarded to Intertek Perth for analysis (FP6/MS/OES - 21 element combination Na_2O_2 fusion with combination OES/MS). • ALS Laboratory in Brisbane was used for the Company's initial due diligence work programs and was selected as the umpire laboratory since Phase 1. ALS conducts ME-ICP89, with a Sodium Peroxide Fusion. Detection limits for lithium are 0.01-10%. Sodium Peroxide fusion is considered a "total" assay technique for lithium. In addition, 22 additional elements assayed with Na_2O_2 fusion, and combination MS/ICP analysis.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Three phases of drilling were undertaken at the Project using RC and DD techniques. All the RC drilling used face sampling hammers. • Phase 1 and 2 programs used a 5.25 inch hammers while Phase 3 used a 5.75-inch hammer. • All DD holes were completed using PQ and HQ core from surface (85mm and 63.5mm). • All DD holes were drilled in conjunction with a Reflex ACT II tool; to provide an accurate determination of the bottom-of-hole orientation. • All fresh core was orientated to allow for geological, structural and geotechnical logging by a Company geologist.

Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• A semi-quantitative estimate of sample recovery was completed for the vast majority of drilling. This involved weighing both the bulk samples and splits and calculating theoretical recoveries using assumed densities. Where samples were not weighed, qualitative descriptions of the sample size were recorded. Some sample loss was recorded in the collaring of the RC drill holes. • DD recoveries were measured and recorded. Recoveries in excess of 95.8% have been achieved for the DD drilling program. Drill sample recovery and quality is adequate for the drilling technique employed. • The phase 2 DD twin program has identified a positive grade bias for lithium in the DD compared to the RC results.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All drill sample intervals were geologically logged by Company geologists. • Where appropriate, geological logging recorded the abundance of specific minerals, rock types and weathering using a standardised logging system that captured preliminary metallurgical domains. • All logging is qualitative, except for the systematic collection of magnetic susceptibility data which could be considered semi quantitative. • Strip logs have been generated for each drill hole to cross-check geochemical data with geological logging. • A small sample of washed RC drill material was retained in chip trays for future reference and validation of geological logging, and sample reject materials from the laboratory are stored at the Company's field office. • All drill holes have been logged and reviewed by Company technical staff. • The logging is of sufficient detail to support the current reporting of a Mineral Resource.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• RC samples were cone split at the drill rig. For interpreted waste zones the 1 or 2m rig splits were later composited using a riffle splitter into 4m composite samples. • DD core was cut with a core saw and selected half core samples totalling 427.1kg dispatched to Nagrom Laboratory in Perth for preliminary metallurgical test work. • The other half of the core, including the bottom-of-hole orientation line, was retained for geological reference. • The remaining DD core was quarter cored for geochemical analysis. • Since December 2018, samples were submitted to Intertek Tarkwa (SP02/SP12) for sample preparation. Samples were weighed, dried and crushed to -2mm in a Boyd crusher with an 800-1,200g rotary split, producing a nominal 1,500g split crushed sample; which was subsequently pulverised in a LM2 ring mill. Samples were pulverised to a nominal 85% passing 75µm. All the preparation equipment was flushed with barren material prior to the commencement

		of the job. Coarse reject material was kept in the original bag. Lab sizing analysis was undertaken on a nominal 1:25 basis. Final pulverised samples (20g) were airfreighted to Intertek in Perth for assaying. • The vast majority of samples were drilled dry. Moisture content was logged qualitatively. All intersections of the water table were recorded in the database. • Field sample duplicates were taken to evaluate whether samples were representative and understand repeatability, with good repeatability. • Sample sizes and laboratory preparation techniques were appropriate and industry standard.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Analysis for lithium and a suite of other elements for Phase 1 drilling was undertaken at SGS Johannesburg / Vancouver by ICP-OES after Sodium Peroxide Fusion. Detection limits for lithium (10ppm – 100,000ppm). Sodium Peroxide fusion is considered a “total” assay technique for lithium. • Review of standards and blanks from the initial submission to Johannesburg identified failures (multiple standards reporting outside control limits). A decision was made to resubmit this batch and all subsequent batches to SGS Vancouver – a laboratory considered to have more experience with this method of analysis and sample type. • Results of analyses for field sample duplicates are consistent with the style of mineralisation and considered to be representative. Internal laboratory QAQC checks are reported by the laboratory, including sizing analysis to monitor preparation and internal laboratory QA/QC. These were reviewed and retained in the company drill hole database. • 200 samples were sent to an umpire laboratory (ALS) and/assayed using equivalent techniques, with results demonstrating good repeatability. • Atlantic’s review of QAQC suggests the SGS Vancouver and Intertek Perth laboratories performed within acceptable limits. • No geophysical methods or hand-held XRF units have been used for determination of grades in the Mineral Resource.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Significant intersections were visually field verified by company geologists and Shaun Searle of Ashmore during the 2019 site visit. • Drill hole data was compiled and digitally captured by Company geologists in the field. Where hand-written information was recorded, all hardcopy records were kept and archived after digitising. • Phase 1 and 2 drilling programs were captured on paper or locked excel templates and migrated to an MS Access database and then into Datashed (industry standard drill hole database management software). The Phase 3 program was captured using LogChief which has inbuilt data validation

		protocols. All analytical results were transferred digitally and loaded into the database by a Datashed consultant. • The data was audited, and any discrepancies checked by the Company personnel before being updated in the database. • Twin DD holes were drilled to verify results of the RC drilling programs. Results indicate a positive bias towards the DD method when compared to RC drilling for Li_2O, and it was shown that there is severe iron contamination in the RC drilling process. • Reported drill hole intercepts were compiled by the Chief Geologist. • Adjustments to the original assay data included converting Li ppm to Li_2O%.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• The collar locations were surveyed in WGS84 Zone 30 North using DGPS survey equipment, which is accurate to 0.11mm in both horizontal and vertical directions. All holes were surveyed by qualified surveyors. Once validated, the survey data was uploaded into Datashed. For the current resource upgrade, HHGPS collar positions were used. • RC drill holes were routinely down hole surveyed every 6m using a combination of EZ TRAC 1.5 (single shot) and Reflex Gyroscopic tools. • After the tenth drill hole, the survey method was changed to Reflex Gyro survey with 6m down hole data points measured during an end-of-hole survey. • All Phase 2 and 3 drill holes were surveyed initially using the Reflex Gyro tool, but later using the more efficient Reflex SPRINT tool. • An UAV survey was conducted, covering an area of 12km^2 using a DJI Inspire I multirotor UAV with a 5MP camera and with ground control accuracy of sub-10mm for X, Y and Z, provided by a Trimble R8 GPS with RTK. • The topographic survey and photo mosaic output from the survey is accurate to 100mm. • Locational accuracy at collar and down the drill hole is considered appropriate for resource estimation purposes.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The RC holes were initially drilled on 100m spaced sections and 50m hole spacings orientated at 300° or 330° with dips ranging from -50° to -60°. Planned hole orientations/dips were occasionally adjusted due to pad and/or access constraints. • For Phase 2 and 3 programs, hole spacing was reduced to 80m spaced sections and 40m hole spacings orientated at 300° or 310°, while the Abonko, Kaampakrom and Ewoyaa NE trends were drilled at 220°, with dips of -50°. • Samples were composited to 1m intervals prior to estimation.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key*	• The drill line and drill hole orientation are oriented as close as practicable to perpendicular to the orientation of the general mineralised orientation. • Most of the drilling intersects the mineralisation at close to 90 degrees

	mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	ensuring intersections are representative of true widths. It is possible that new geological interpretations and/or infill drilling requirements may result in changes to drill orientations on future programs. • No orientation-based sampling bias has been identified in the data.
Sample security	• *The measures taken to ensure sample security.*	• Samples were stored on site prior to road transportation by Company personnel to the SGS preparation laboratory. • With the change of laboratory to Intertek, samples were picked up by the contractor and transported to the sample preparation facility in Takoradi.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Prior to the drilling program, a third-party Project review was completed by an independent consultant experienced with the style of mineralisation. • In addition, Shaun Searle of Ashmore reviewed drilling and sampling procedures during the 2019 site visit and found that all procedures and practices conform to industry standards.

JORC Table 1, Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.*	• Part of the Project is a joint-venture, with the license in the name of the joint-venture party (Barari DV Ghana). • The southern portion of the deposit occurs within a wholly owned local subsidiary Green Metals Resources Ltd. • The deposits are located on two licences Mankessim RL3/55 and Mankessim South PL109 • Mankessim South – (Green Metals Resources Ltd – 100% Atlantic) licence was renewed for three years and expires on 18th February 2023. • Mankessim - (Barari DV Ghana Ltd – 90% Atlantic) was renewed for three years and expires on the 22nd of March 2023 • The licenses are in good standing with no known impediments.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Historical trenching and mapping were completed by the Ghana Geological survey during the 1960's. But for some poorly referenced historical maps, none of the technical data from this work was located. Many of the historical trenches were located, cleaned and re-logged. No historical drilling was completed.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Pegmatite-hosted lithium deposits are the target for exploration. This style of mineralisation typically forms as dykes and sills intruding or in proximity to granite source rocks. • Surface geology within the Project area typically consists of sequences of staurolite and garnet-bearing pelitic schist and granite with lesser pegmatite and mafic intrusives. Outcrops are typically sparse and confined to ridge tops with colluvium and mottled laterite blanketing much of the undulating terrain making geological mapping challenging. The

Criteria	JORC Code explanation	Commentary
		hills are often separated by broad, sandy drainages.
Drill hole information	• *A summary of all information material to the under-standing of the exploration results including a tabulation of the following information for all Material drill holes:* ◦ *easting and northing of the drill hole collar* ◦ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ◦ *dip and azimuth of the hole* ◦ *down hole length and interception depth* ◦ *hole length* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• Exploration results are not being reported. • All information has been included in the appendices. No drill hole information has been excluded.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Exploration results are not being reported. • Not applicable as a Mineral Resource is being reported. • No metal equivalent values are being reported.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• The drill line and drill hole orientation are oriented as close to 90 degrees to the orientation of the anticipated mineralised orientation as practicable. • The majority of the drilling intersects the mineralisation between 60 and 80 degrees.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Relevant diagrams have been included within the Mineral Resource report main body of text.
Balanced Reporting	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• All hole collars were surveyed WGS84 Zone 30 North grid using a differential GPS. All RC and DD holes were down-hole surveyed with a north-seeking gyroscopic tool. • Exploration results are not being reported.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples - size and method of treatment; metallurgical test results; bulk density,*	• Results were estimated from drill hole assay data, with geological logging used to aid interpretation of mineralised contact positions. • Geological observations are included in the report.

Criteria	JORC Code explanation	Commentary
	groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large- scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Follow up RC and DD drilling will be undertaken. • Further metallurgical test work may be required as the Project progresses through the study stages. • Drill spacing is currently considered adequate for the current level of interrogation of the Project.

APPENDIX 2

JORC Table 1, Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• The database has been systematically audited by Atlantic geologists. • All drilling data has been verified as part of a continuous validation procedure. Once a drill hole is imported into the database a report of the collar, down-hole survey, geology, and assay data are produced. This is then checked by an Atlantic geologist and any corrections are completed by the database manager.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• A site visit was conducted by Shaun Searle of Ashmore during February 2019. Shaun inspected the deposit area, drill core/chips and outcrop. During this time, notes and photos were taken. Discussions were held with site personnel regarding drilling and sampling procedures. No major issues were encountered. •
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The confidence in the geological interpretation is considered to be good and is based on visual confirmation in outcrop and within drill hole intersections. • Geochemistry and geological logging have been used to assist identification of lithology and mineralisation. • The Project area lies within the Birimian Supergroup, a Proterozoic volcano-sedimentary basin located in Western Ghana. The Project area is underlain by three forms of metamorphosed schist; mica schist, staurolite schist and garnet schist. Several granitoids intrude the basin metasediments as small plugs. These granitoids range in composition from intermediate granodiorite (often medium grained) to felsic leucogranites (coarse to pegmatoidal grain size), sometimes in close association with pegmatite veins and bodies. Pegmatite intrusions generally occur as sub-vertical dykes with two dominant trends: either east-northeast (Abonko, Kaampakrom and Ewoyaa Northeast) or north-northeast (Ewoyaa Main) and dip sub-vertically to moderately southeast to east-southeast. Thickness vary across the Project, with thinner mineralised units intersected at Abonko and Kaampakrom between 4 to 12m; and thicker units intersected at Ewoyaa Main between 30 to 60m. • Infill drilling has supported and refined the model and the current interpretation is considered robust. • Observations from the outcrop of mineralisation and host rocks; as well as infill drilling, confirm the geometry of the mineralisation. • Infill drilling has confirmed geological and grade continuity.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The Ewoyaa Main Mineral Resource area extends over a north-south strike length of 1,500m (from 578,350mN – 579,850mN), has a maximum width of 60m and includes the 180m vertical interval from 80mRL to -100mRL. • The Abonko Mineral Resource area extends over an east-west strike length of 400m (from 716,980mE – 717,380mE), has a maximum width of 12m and includes the 190m vertical interval from 50mRL to -140mRL.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of*	• Using parameters derived from modelled variograms, Ordinary Kriging ("OK") was used to estimate average block grades in three passes using Surpac software. Linear grade estimation was deemed suitable for the Mankessim Mineral Resource due to the geological control on mineralisation. The extrapolation of the lodes

	extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	along strike and down-dip has been limited to a distance of 40m. Zones of extrapolation are classified as Inferred Mineral Resource. • It is assumed that there are no by-products or deleterious elements as shown by metallurgical test work. • Li_2O (%), Ta (ppm), Fe (%), Nb (ppm), Sn (ppm), Cs (ppm), K (%), Al (%) and S (ppm) were interpolated into the block model. • Two block models were created in to match the two main orientations of the known mineralisation. The Ewoyaa block model was rotated on a bearing of 20° and includes estimates for the Ewoyaa Main, Ewoyaa North and Ewoyaa West deposits, whilst the Abonko block model was rotated on a bearing of 295° and includes estimates for the Ewoyaa Northeast, Abonko and Kaampakrom deposits. The block dimensions used in each model were 20m along strike (NS) by 5m across strike (EW) by 5m vertical with sub-cells of 5m by 2.5m by 1.25m. The parent block size dimension was selected on the results obtained from Kriging Neighbourhood Analysis that suggested this was the optimal block size for the Mankessim dataset. • An orientated 'ellipsoid' search was used to select data and adjusted to account for the variations in lode orientations, however all other parameters were taken from the variography derived from Domains 1001, 2002 and 8001. Up to three passes were used for each domain. First pass had a range of 50m, with a minimum of 8 samples. For the second pass, the range was extended to 100m, with a minimum of 4 samples. For the third pass, the range was extended to 250m, with a minimum of 2 samples. A maximum of 20 samples was used for each pass with a maximum of 4 samples per hole. • No assumptions were made on selective mining units. • Correlation analysis was conducted on the domains at Ewoyaa Main. It is evident that Li_2O has little correlation with any of the other elements presented in the table, apart from weak negative correlations with caesium and potassium. • The mineralisation was constrained by pegmatite geology wireframes and internal lithium bearing mineralisation wireframes prepared using a nominal 0.4% Li_2O cut-off grade and a minimum down-hole length of 3m. The wireframes were used as hard boundaries for the interpolation. • Statistical analysis was carried out on data from 31 mineralised domains. Following a review of the population histograms and log probability plots and noting the low coefficient of variation statistics, it was determined that the application of high grade cuts was not warranted. • Validation of the model included detailed visual validation, comparison of composite grades and block grades by northing and elevation and a nearest neighbour check estimate. Validation plots showed good correlation between the composite grades and the block model grades.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages and grades were estimated on a dry in situ basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters*	• The Statement of Mineral Resources has been constrained by the mineralisation solids and reported

<table>
<tr>
<td></td>
<td>applied.</td>
<td>above a cut-off grade of 0.5% Li_2O. A high-level Whittle optimisation demonstrates reasonable prospects for eventual economic extraction. Preliminary metallurgical test work indicates that there are four main geometallurgical domains; weathered and fresh coarse grained spodumene bearing pegmatite (P1); and weathered and fresh medium grained spodumene bearing pegmatite (P2). From test work completed to date at a 6.3mm crush, the P1 material produces a 6 to 6.6% Li_2O concentrate at approximately 70 to 85% recovery (average 75% recovery), whilst P2 material produces 5.5 to 6% Li_2O concentrate at approximately 35 to 65% recovery (average 47% recovery). Further geological, geotechnical, engineering and metallurgical studies are recommended to further define the lithium mineralisation and marketable products.</td>
</tr>
<tr>
<td>Mining factors or assumptions</td>
<td>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</td>
<td>Ashmore has assumed that the deposit could be mined using open pit mining techniques. A high level Whittle optimisation of the Mineral Resource supports this view.</td>
</tr>
<tr>
<td>Metallurgical factors or assumptions</td>
<td>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</td>
<td>Preliminary metallurgical test work has been conducted on the Mankessim material types. Test work indicates that there are four main geometallurgical material types in occurrence at the Project, with their relative abundances, concentrate grades and recoveries shown below.
<table>
<tr><th rowspan="2">Geomet Type</th><th colspan="4">Weathered</th></tr>
<tr><th>Tonnage Mt</th><th>Li_2O %</th><th>Recovery %</th><th>Conc Grade Li_2O (%)</th></tr>
<tr><td>P1</td><td>1.4</td><td>1.12</td><td>75</td><td>6.6</td></tr>
<tr><td>P2</td><td>0.7</td><td>1.08</td><td>61</td><td>6.6</td></tr>
<tr><td>Total</td><td>2.1</td><td>1.10</td><td></td><td></td></tr>
</table>
<table>
<tr><th rowspan="2">Geomet Type</th><th colspan="4">Primary</th></tr>
<tr><th>Tonnage Mt</th><th>Li_2O %</th><th>Recovery %</th><th>Conc Grade Li_2O (%)</th></tr>
<tr><td>P1</td><td>13.2</td><td>1.35</td><td>76</td><td>6.6</td></tr>
<tr><td>P2</td><td>5.9</td><td>1.29</td><td>47</td><td>5.5</td></tr>
<tr><td>Total</td><td>19.2</td><td>1.33</td><td></td><td></td></tr>
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<tr>
<td>Environmental factors or assumptions</td>
<td>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these</td>
<td>No assumptions have been made regarding environmental factors. Atlantic will work to mitigate environmental impacts as a result of any future mining or mineral processing.</td>
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Atlantic Lithium Limited **ACN** 127 215 132
Post: Level 33, Australia Square, 264 George Street, Sydney NSW 2000
Phone: +61 2 8072 0640 **Email:** info@atlanticlithium.com.au **Website:** www.atlanticlithium.com.au

	potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Bulk density measurements were completed on selected intervals of diamond core drilled at the deposit. The measurements were conducted at the Mankessim core processing facility using the water immersion/Archimedes method. The weathered samples were coated in paraffin wax to account for porosity of the weathered samples. • A total of 1,447 measurements were conducted on the Mankessim mineralisation, with samples obtained from oxide, transitional and fresh material. • Bulk densities ranging between 1.7t/m^3 and 2.75t/m^3 were assigned in the block model dependent on lithology, mineralisation and weathering.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The Mineral Resource estimate is reported here in compliance with the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' by the Joint Ore Reserves Committee (JORC). The Mankessim Mineral Resource was classified as Indicated and Inferred Mineral Resource based on data quality, sample spacing, and lode continuity. The Indicated Mineral Resource was defined within areas of close spaced RC and DD drilling of less than 40m by 40m, and where the continuity and predictability of the lode positions was good. In addition, Indicated Mineral Resource was confined to the fresh rock. The Inferred Mineral Resource was assigned to transitional material, areas where drill hole spacing was greater than 40m by 40m, where small isolated. • The input data is comprehensive in its coverage of the mineralisation and does not favour or misrepresent in-situ mineralisation. The definition of mineralised zones is based on high level geological understanding producing a robust model of mineralised domains. This model has been confirmed by infill drilling which supported the interpretation. Validation of the block model shows good correlation of the input data to the estimated grades. • The Mineral Resource estimate appropriately reflects the view of the Competent Person.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• Internal audits have been completed by Ashmore which verified the technical inputs, methodology, parameters and results of the estimate.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of*	• The geometry and continuity have been adequately interpreted to reflect the applied level of Indicated and Inferred Mineral Resource. The data quality is good and the drill holes have detailed logs produced by qualified geologists. A recognised laboratory has been used for all analyses. • The Mineral Resource statement relates to global estimates of tonnes and grade. • No historical mining has occurred; therefore reconciliation could not be conducted.

	the estimate. • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	

Notes to Editors:

About Atlantic Lithium
www.atlanticlithium.com.au

Atlantic Lithium (formerly "IronRidge Resources") is an AIM-listed lithium company advancing a portfolio of projects in Ghana and Côte d'Ivoire through to production.

The Company's flagship project, the Ewoyaa Project in Ghana, is a significant lithium pegmatite discovery on track to become West Africa's first lithium producing mine. The project is fully funded to production under an agreement with Piedmont Lithium for US$102m and set to produce a premium lithium product. A robust update Scoping Study indicates Life of Mine revenues exceeding US$3.4bn.

Atlantic holds a 560km^2 & 774km^2 tenure across Ghana and Côte d'Ivoire respectively, comprising significantly under-explored, highly prospective licenses.